

# MODEL CA6 - SILICA ANALYZER

## Compact online colorimeter for the automatic measurement of Silica

### APPLICATION FIELDS

- Power plants
- Ultrapure water treatment
- Cooling water
- Water steam cycle
- Condensate analysis
- High-pressure boiler feedwater
- Reversed osmosis
- Turbine protection
- Demineralization plants



### ADVANTAGES / FEATURES

#### Dual compartment enclosure

To ensure complete separation between the electronics and the wet part.

#### Low reagent consumption

Minimum operating cost by small reagent consumption, only 2.5L (0.66 US.gal) for the 16 mm cell / 5L (1.32 US.gal) for the 26 mm cell of each reagent every 90 days with 15 minute analysis frequency.

#### Automatic calibration / validation / cleaning

Validation, cleaning and calibration are standard features which significantly reduce downtime and operator intervention ensuring the most accurate results are obtained.

Free selectable validation, cleaning and calibration intervals.

#### Wide measuring range

The determination ranges of the CA6 Silica Analyzer vary from trace  $\mu\text{g/L}$  to 150  $\text{mg/L}$  using internal dilution module.

#### Color touchscreen user interface

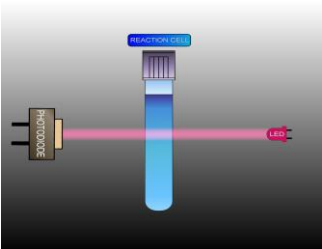
The CA6 Colorimeter is equipped with a graphic touchscreen interface showing measured values and status information. Easy access to menus and functions. Multiple languages. Integrated datalogger with USB download.

#### Factory tested, ready for installation and operation

Just connect the power, sample, and reagent lines and the analyzer is fully operational.

#### Multiple streams

Dual streams version available. External Sequencer, switching up to 4 sample streams.



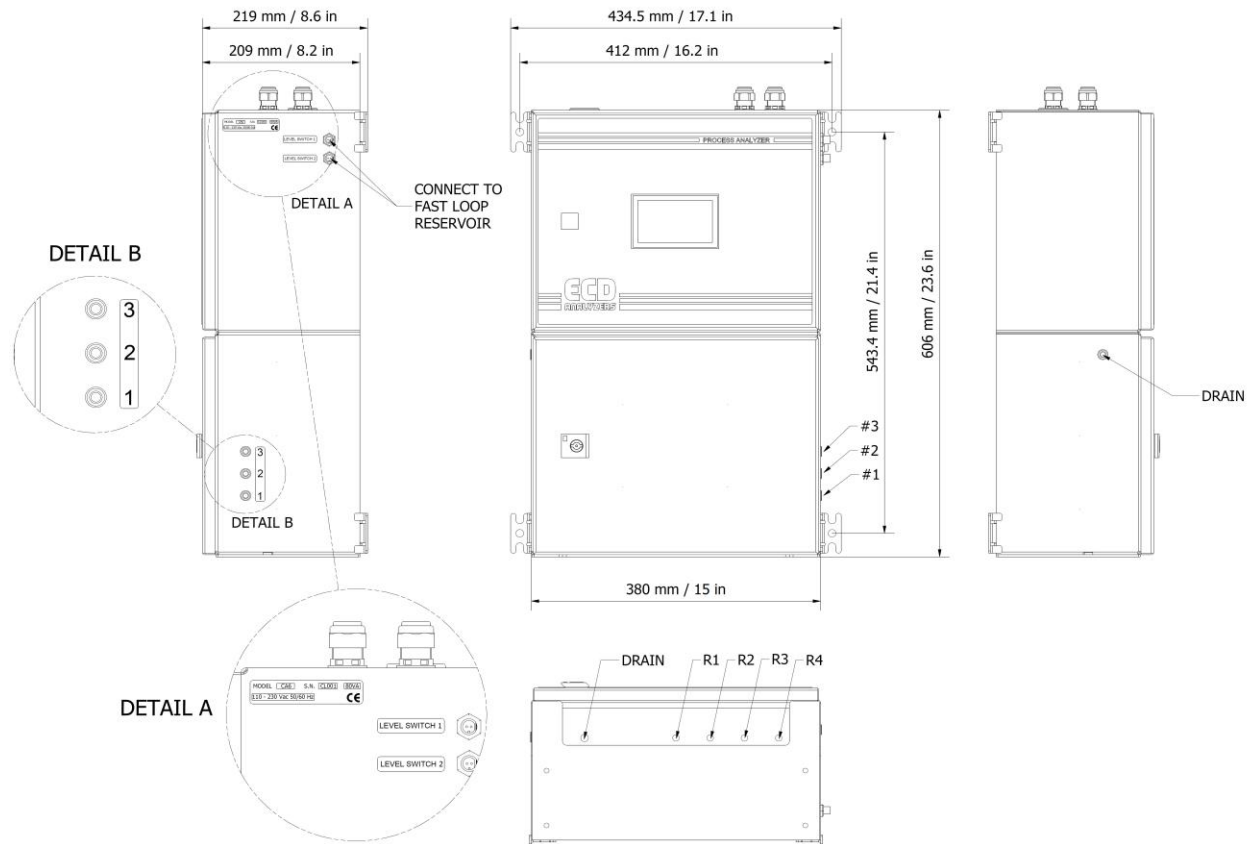
#### MEASUREMENT PRINCIPLE

Soluble silica reacts with the molybdate ion in an acid medium to form a green-yellow colored silico-molybdic acid complex that in its turn is converted to a blue complex with the addition of the reducing reagent. Oxalic acid is added to minimize the phosphate interference. The absorbance intensity is proportional to the silica concentration in the sample and is determined at 850 nm.

## TECHNICAL SPECIFICATIONS

Measured parameter:	Si <sup>4+</sup> / SiO <sub>2</sub> (ppb, ppm, mg/l).
Measuring principle:	Differential photometric absorbance.
Measuring range:	0.5 to 1000 ppb (26 mm cell) 1 to 5000 ppb (16 mm cell) up to 150 mg/L with internal dilution.
Reproducibility:	± 0.5 ppb or ± 5%, whichever is greater (26 mm cell) ± 1 ppb or ± 5%, whichever is greater (16 mm cell)
Analysis frequency:	Freely programmable, batch near-continuous analysis.
Cycle time:	8-10 minutes, including conditioning before analysis cycle and rinsing after measuring.
Reaction cell:	Temperature heated
Sample:	Pressure-free from overflow vessel Temperature: 41 - 122 °F (5 to 50 °C) Flow Rate: 80 to 500 mL/min Connection: 6 mm (¼-in.)
Drain:	Pressure-free, atmospheric drain Connection: 12 mm (½-in.)
N° of streams:	1, 2 with integrated switching valve 3, 4 with external sequencer

Dimensions (H x W x D):	23.6 x 15.0 x 8.2 in / 606 x 380 x 209 mm
Weight:	Approx. 44 lbs (20 Kg)
Power supply:	Voltage: 100 - 240 VAC 50/60 Hz standard or 24 VDC (option) Power consumption: max. 80 VA
Outputs:	2 x 4-20 mA outputs for measured data Modbus RTU RS485
Alarms:	4 SPDT programmable potential free relays
Digital input:	Remote start / stop
Operating Temperature:	41 - 113 °F (5 - 45 °C)
Humidity:	10 to 90% non-condensing (indoor use, outdoor installation only possible with protective cabinet or shelter not included)
Installation:	Wall mount (standard), bench top support or panel mount (options).
Ingress Protection:	IP54



[www.ECDanalyzers.com](http://www.ECDanalyzers.com)

**ECD**  
ANALYZERS

ECD ANALYZERS, LLC 1500 N Kellogg Dr Anaheim, CA 92807 USA - Phone: +1-714-695-0051 Fax: +1-714-695-0057

Email: [support@ECDanalyzers.com](mailto:support@ECDanalyzers.com) [www.ECDanalyzers.com](http://www.ECDanalyzers.com)